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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

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Unemployment Rate

Seasonally Adjusted
August*

ARIZONA	6.7%
Maricopa Co.	5.3%
Pima Co.	5.4%
United States	6.8%

Consumer Price Index

National-August
1967 - Base Year

Wage Earner/Clerical Worker -	323.4
% Chg. Yr. Ago	1.2
All Urban -	328.6
% Chg. Yr. Ago	1.6

Phoenix-2nd Qtr. 1986
1977 - Base Year

All Urban -	192.6
% Chg. Yr. Ago	0.9

Tucson-2nd Qtr 1986
1st Qtr. 1983 - Base Qtr.

All Urban -	116.0
% Chg. Yr. Ago	1.0

* Preliminary

Education and Training in Arizona

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Because of time limitations, it was impossible to verify all of the data presented in the following articles. The data, analyses, and opinions expressed are those of the authors and do not necessarily reflect those of the Department of Economic Security.

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

The Challenge

Society changes. It is a fact of history--fact of technology--and one that we would not really want to alter. These changes, however, impact in ways that we frequently overlook and, in overlooking, we do ourselves a disservice. Let us look for just a minute at the changing labor force.

Our economists and our futurists seem to share a vision of an economy which can only be borne by a "new worker"--an intelligent, educated, literate worker who is skilled and trained to shoulder the new era. It is just this fact that should be emphasized. It is just this that we dare not overlook.

The first fact about the new worker is that there are fewer and fewer of them. It was estimated in 1960 that there were eight prime-age adults (21-64 years of age) to every person over 65 years of age. In the year 2000, the ratio of prime-age adults to elderly will be 4.4 to 1. By the time the so-called Baby Boomers reach retirement age, 2025, the ratio will be 2.8 to 1. These ratios are optimistic and they clearly demonstrate that there will be fewer and fewer people in the work force to support a "retired" population.

We know, then, that the new worker will be a scarcer resource and, to an extraordinarily increasing degree, he and she will be what we today term "minority", because it is this segment of the population that is increasing. Between 1960 and 1982 the percentage of all children younger than 15 years old fell by 7 percent. Between 1960 and 1980, people older than 65 years of age grew by 54 percent. One demographer concludes that the elderly population of the United States grew at a higher percentage rate than the total population of India. Today, 24 percent of those younger than 15 years are Hispanic or Black. Only 11 percent of those minorities are older than 65. The percentage of Hispanic children continues to increase. Between 1975 and 1983 there was a 15 percent growth of Hispanic children. Non-Hispanic children saw a decline in the period of 6 percent.

It seems evident that if the emerging new society to which we bear witness is to affirm its promise and become real, it is inextricably tied to a work force of sufficient literacy and education to shoulder it. The indications, however, are troublesome.

Among Black youngsters nationally, 21 percent of those between the ages of 16 and 24 are school dropouts. Two-thirds of Black dropouts come from families making less than $10,000. Two-thirds of Black dropouts come from families where the head of the household has less than a high school education. Census data indicate that in 1981, 36 percent of 18-19 year old Hispanic youngsters were high school dropouts, more than double the national average.

As a one-time policymaker leaving political office, let me offer no explanations. Let me offer only challenge. At the time most citizens who are productive today retire, the optimistic ratio of employed to retired will be 2.8 to 1. Those few employed, if current trends continue, will likely be Black or Hispanic, functionally illiterate, dropouts, and questionably capable of maintaining not only themselves but also of maintaining the ever-increasing elderly population.

We must now invest and risk as much in education as we once did in dams, canals, mines, farms, and merchants who served them all--investments in inner-city schools, bilingual education, special education, gifted programs, high risk populations, higher education, minority retention and recruitment, education for the developmentally disabled, and most of all, in our children and their teachers.

Demographic trends are not inexorable ends. They are merely hints of what we can alter if we choose to. The future is only at risk if we choose not to risk.

Senator Alfredo Gutierrez

Education in Arizona's Secondary Schools for Jobs

Introduction: By Barbara Border, Deputy Associate Superintendent-Vocational Education.

Arizona has a dynamic economy combined with changing technologies. In such an economy the greatest challenge is to assure that the student is trained to carry out the tasks reflecting current technology as required by the employers, and this is exactly what vocational programs in Arizona's secondary schools are accomplishing.

Several key elements appear to be the reasons for success. One element in the success of Arizona's vocational education programs is a close working relationship with business and industry--especially through advisory councils. A second key element in this success is the leadership role that the Vocational Education Division of the Arizona Department of Education (ADE) is providing in vocational preparation, guidance, planning, technical support, and promotion of education and business cooperation. One of the most dynamic ventures with business and industry has been the validation of skills and tasks with workers in business and industry for the 40 most needed occupational job clusters.

In July 1985, the State Board of Education/Vocational Education approved program standards for each vocational education program. This leadership from the Board and ADE will ensure that students receive a high quality training program which will prepare them for business and industry as new employees.

The Vocational Education unit of ADE provides support in six vocational preparation areas which focus training efforts on the top 40 occupational clusters in Arizona. The six areas of Vocational Education providing this training include:

Agriculture Education.
Business and Office Education.
Health Education.
Occupational Home Economics Education.
Marketing Education.
Trade and Industry Education.

Related training and support services are also offered by:

Consumer and Homemaking Education.
Special Needs Support Services.
Vocational Guidance.

For each of the preparation areas mentioned above, a knowledgeable state supervisor or specialist is responsible for working with schools across Arizona. These supervisors and specialists provide direction for new trends and innovative ideas in their occupational areas for Arizona's schools. Each was invited to write short updates on trends and developments in their areas for this newsletter.

Agriculture Education: By Richard Condit, State Supervisor-Agriculture.

Vocational agriculture programs provide for competency skill development in four occupational cluster areas: Agriculture Business and Management, Horticulture, Agriculture Mechanics, and Renewable Natural Resources. There are 48 high school and eight community college programs of vocational agriculture in Arizona. Total enrollment in these programs is approximately 4,500.

The general public's concept of agriculture is confined to production agriculture (farming and ranching). Most people are not aware that agricultural jobs include landscaping, working in a plant nursery, Forest and Park Rangers, and sales and management positions in businesses that process or distribute agricultural products. Agriculture continues to employ in excess of 20 percent of the people in this country. Contrary to popular opinion and continuing the trends of the past 15 years, agricultural employment in Arizona continues to expand in terms of actual numbers of people employed.

In Arizona, Agriculture Business and Management constitutes 72 percent of the total employment while Horticulture, Agriculture Mechanics, and Renewable Natural Resources represent 15, 11, and 2 percent respectively. The areas of Agriculture Business and Management and Horticulture offer the greatest opportunites for agricultural employment in our state. Horticultural employment has shown a rapid increase in the past six years in excess of 80 percent.

Agriculture Business and Management which includes jobs in input industries to production agriculture and the distribution and processing of agricultural products also shows expansion in employment. The expansion in employment in this occupational cluster is not, however, in the production component which appears to be neither growing nor declining but in the input, distribution, and processing jobs.

The need for employees possessing agricultural competencies continues to grow in Arizona, in spite of rapid urbanization and economic hard times in production agriculture. Arizona's vocational agriculture programs are striving to keep pace with the dynamic nature of the state's agricultural employment.

Business Education: By Janet M. Gandy, State Supervisor-Business, and Joanne Walker, Assistant State Supervisor-Business.

The labor market demand for administrative support positions in business offices has increased. This increase has resulted from today's expanding and fast-paced technology and has a definite impact on the primary goal of vocational business education, that of providing students with entry-level competencies to obtain jobs which will allow them to move upward on their career ladders.

In the Vocational Education Unit of ADE, we facilitate and lend direction to the business education programs throughout secondary and postsecondary schools in Arizona. As facilitators, we offer technical assistance and consultation to teachers, boards, advisory committees, school administrators, and business people in discussing business programs, program standards, trends, and current methodology.

In supervision of business programs, we provide technical assistance in the development of instructional programs by local teacher and/or educational agencies. At present, the Accounting Cluster curriculum is completed and parallels the validated occupational competencies; also, the Administrative Support Cluster curriculum guidelines are being developed this year and should be ready for dissemination by October.

Since administrative support and accounting and computing occupations are in the top ten in job demand in Arizona, greater emphasis is being placed on the guidelines and workshops in these areas. During 1985, Arizona was short over 9,000 Administrative Support Occupation program completers. This represents significant job opportunities for high school graduates in these areas, if students receive training in the job-entry skills. In a recent study of Arizona employers of high school vocational students, approximately 80 percent rated these students' work attitudes and work quality better than average.

A direct link with industry is provided through the Arizona Business Education Advisory Council. We meet with the council and various educational and private groups to discuss business programs which help us validate the strengths and weaknesses of programs in business and assist with improvement of these programs. This also allows us to determine needs in business programs relative to the competency list and the state plan for vocational education. Industrial input of their needs and sharing of information on business program enrollments through follow-up surveys lets us distribute data to districts to assist in determining any necessity for curriculum changes. Information is also made available on facilities, facility layout, and equipment.

An integral part of the business curriculum in Arizona is the activities of Future Business Leaders of America/Phi Beta Lambda

(FBLA/PBL). FBLA/PBL stresses leadership, citizenship, self-image, and social activities on both local and national levels. On the state level, we serve as advisors by meeting with business people and local organization advisors interested in the program to help with communication, planning, organization, and competition. Business education programs meet the needs of Arizona's employers.

Health Occupations Education: By Ellen Pearson, State Supervisor-Health.

Vocational Health Occupations Education (HOE) bridges the gap between education and the world of work, allowing students to acquire academic skills while achieving the skills required for employment and career mobility. Secondary health occupations programs utilize an articulated, competency based curriculum. The programs provide both campus and industry-based learning experiences and require cooperation between the schools and the health care industry.

The ideal course sequence for a secondary HOE program is as follows: Tenth-grade students complete a Health Careers Cluster Course which helps them clarify career goals and combines classroom instruction with on-the-job experience, for the purpose of mastering both validated core competencies and the competencies for an entry-level health assistant. Twelfth-grade students obtain entry-level training in areas of health that need additional training such as Nursing Assistant and Practical Nurse. Additionally, twelfth-grade students may enroll in a Health Careers Cooperation Education Course. Students can participate in Vocational Industrial Clubs of America (VICA) which is an integral part of the HOE program.

The overall program goals for secondary health occupations education include providing students the opportunity to explore health care occupations, to matriculate into postsecondary health occupations education, and to become employed in the health care field.

Postsecondary health occupations education in Arizona prepares and updates people for employment and upgrades those already employed in over 30 health careers. This education occurs in the state's community colleges, skill centers, and private technical schools through the following options:

- The associate degree program provides broad training in which students must meet general education requirements in the sciences, humanities, and arts as well as the major area of specialization in a health occupation.

- The certificate program provides training in the major area of specialization in a health occupation.

- Refresher courses are short-term occupationally-specific courses designed to update current practitioners or to prepare individuals who have been out of the labor market for a period of time for reentry. Refresher courses in nursing are the most commonly offered adult courses to help individuals reenter the health field.

- Upgrading courses are short-term and designed to help individuals advance within their health field. Training in advanced skills, new technology, and management skills is provided.

In addition to meeting regional accreditation standards, health occupations programs must meet requirements of the official state board of the relevant health profession.

Occupational Home Economics Education: By Mary Lewkowitz, State Supervisor-Occupational Home Economics.

Arizona's second largest employer, the hospitality industry, has a need for trained employees who see positive career opportunities and desire to use this industry as a profession. Occupational home economics programs are training students to meet the challenge of the hospitality industry employment needs.

The first step in meeting this training need has been the identification and

validation of competencies needed by workers in the industry. To do this task, over 150 employees working in the hospitality industry have reviewed, improved, and rated a list of competencies needed for successful employment and advancement. These validated competencies have been distributed to all interested trainers throughout the state. In addition, the competencies are used as the basis for program development, curriculum writing and in the final analysis, in evaluating student progress in the classroom.

Occupational home economics training for the hospitality industry addresses two key employment areas:

1. Lodging operations--housekeeping, custodial, and recreation.

2. Food and beverage operations--food production and food service.

Program completers have been trained in job skills, attitudes, basic skills, and responsibility skills identified as essential for successful career development in the industry.

Occupational home economics also trains skilled workers for other high employment demand areas in Arizona. These occupational clusters include child care and guidance; fashion construction, coordination, and sales; and home furnishings. Occupational home economics students are primarily trained for service occupations, many of which impact on the Arizona tourist industry.

Marketing Education: By Dave Muehlbauer, State Supervisor-Marketing.

Virtually nothing happens in our economy until a product or service is sold. Our economic well-being is dependent upon an effective process of marketing to match the goods and services which are produced with consumers who are willing to buy them. Across the country, employment in marketing occupations represents a large and growing number of employment opportunities. In Arizona, with our strong emphasis upon tourism, this is especially true as sales and marketing occupations represent the largest category of employment.

Marketing education programs at the high schools and community colleges serve to prepare students for careers in sales, marketing, management, and entrepreneurship. The programs serve students who are seeking employment for the first time, as well as those who are upgrading their skills. One of the fastest growing areas of interest within marketing education is the area of entrepreneurship. Within the past few years, an increasing number of high schools have been offering specialized programs in entrepreneurship and small business management. With this focus, students will be creating their own employment opportunities rather than limiting themselves to jobs in existing organizations.

Enrollment in marketing education programs at the secondary level is increasing with approximately 3,700 students involved in programs offered at 59 high schools. Community college and adult programs serve an additional 23,000 students, in both credit courses and specialized workshops and seminars.

Instruction in marketing education programs is based on the skills identified for marketing occupations, and verified by representatives of marketing businesses. One of the most effective methods of instruction at the high school level is cooperative education, where students are provided a coordinated training position in an actual marketing business. Students involved in this type of experience not only develop and refine their sales and marketing skills, but they also improve the important human relations and communications skills which are critical to success in the field of marketing.

High school marketing education programs also provide a unique set of experiences for students through the Distributive Education Clubs of America (DECA) student organization. DECA provides students the opportunity to organize and operate a professional organization involved in personal development, leadership, and community

service. Student membership in DECA has reached 2,800 members. During the 1985-1986 school year, over 1,000 students attended the State DECA Conference and participated in a series of competitive events directly related to specific marketing occupations. Several of these students went on to receive outstanding recognition at the National DECA Conference, with four national award winners and eight additional students receiving special recognition.

Marketing education is a growing program, serving an increasing number of students with a quality instructional program.

Trade And Industrial Education: By Ken Thompson, State Supervisor-Trade and Industry.

Arizona trade and industrial education is healthy and on the move. We can make this statement at a time when all we hear is, "programs are being dropped, declining enrollments are a fact, and increased academic requirements are preventing students from taking their electives in trade and industrial education." All these are valid, yet we are optimistic about the future of trade and industrial education.

That optimism is based on facts. Enrollment in trade and industrial education has increased by over a thousand during FY86. School districts are trying to find ways to provide math and/or science credit for students taking trade and industrial programs. During June of 1985 and 1986, we hosted the National VICA Leadership Conference and U.S. Skill Olympics (the largest in Phoenix and the history of VICA) which gave our programs visibility that can never be duplicated. A few facts about the event are:

- 6,000 students were registered.
- 9,000 people were in attendance.
- 2,000 business-industry-educators helped put on the conference.
- 300,000 square feet of floor space was used.
- Every meeting room at the Phoenix Civic Plaza, Hyatt Regency, and Phoenix Hilton was used.
- 15 hotels were booked.
- 3,000 sleeping rooms were used.
- 7 million dollars worth of equipment and supplies were made available by business and industry from Phoenix and other parts of the country.
- 38 contests were held in the areas of leadership, trades, and health occupations.
- Over 3 million dollars were brought into the economy of Phoenix and Arizona because of this convention.
- At peak travel times, 48 city transit buses were used to transport attendees from their hotels to functions at the Civic Plaza.
- Arizona members won five first places, one silver, and one third place during the 1986 conference.

The future of trade and industrial education is bright, but there is a price to pay. Our state legislators have provided additional funding, but it must go to the support of programs meeting the newly mandated "State Standards for Trade and Industrial Education." Finally, everyone must realize that academic education is very important, but as President Reagan stated, "no more important than vocational education." Trade and industrial education is showing everyone that there is dignity and professionalism in learning and working in a trade, service, or industrial occupation.

Consumer and Homemaking Education: By Kathleen Gushgari, State Supervisor-Consumer and Homemaking.

Consumer and homemaking education in Arizona, as in the rest of the United States, is at a crossroads. Today's

changing environment challenges home economics educators to analyze where home economics is and undertake innovative strategies for advancement based on pertinent technology and social trends.

Arizona has accepted this challenge and developed the Arizona Vocational Home Economics Essential Living Skills, a listing reflecting essential skills and competencies, enabling students to develop as fully-functioning persons and family members. In determining what knowledge would lead to this goal, educators explored and implemented those competencies which will ensure individual and societal survival, productivity, and growth. Approximately 22,000 students, in 138 consumer and homemaking programs, are being taught competencies which are essential for:

- Managing scarce family resources.
- Expressing personal and family goals and relating them to the good of society.
- Evaluating options and making decisions.
- Coping creatively and constructively with crises.
- Experiencing opportunities which provide for the development of a positive self-image and for intellectual, emotional, and social growth.
- Feeding individuals a diet which is nutritionally sound.
- Providing shelter and clothing which protect and enhance self-image.

With the aid of Future Homemakers of America (FHA), a vocational student organization based on the values and concepts of home economics, our consumer and homemaking programs are meeting these competencies and much more. FHA offers the structure necessary to provide students with actual practice in decision-making, problem solving, and leadership.

Consumer and homemaking education is in the unique position of teaching skills valuable to the work place as well as the home. Developing and initiating competencies, justified by societal trends and technological advances, secures consumer and homemaking positions in the educational system while simultaneously improving the quality of life for students involved in the program. These students, in turn, will make the real difference in the future of family life in Arizona.

Industrial Arts/Technology Education: By Hoyt Kenmore, State Supervisor-Industrial Arts and Macke Williams, Assistant Supervisor-Industrial Arts.

Industrial arts/technology education is that portion of industrial education that provides competencies of an exploratory nature for students normally in grades 7-12. It is designed to assist students in developing a decision-making foundation for educational and occupational planning.

Arizona's industrial arts education is rapidly changing from traditional courses such as drafting, woods, metals, plastics, and auto to programs of transportation, communication, construction, and manufacturing. The changes are necessary for the preparation of students to meet the challenges encountered because of modern technological advances within industry. By addressing program clusters, the courses will include experiences in broader occupational areas.

While declining enrollment is a problem in many schools, the trend appears quite different in those schools that are attempting to provide quality industrial arts/technology education programs. Since American Industrial Arts Student Association (AIASA) activities are an integral part of the program, it is not surprising to observe the increasing AIASA membership within Arizona.

Many curriculum materials (both teacher-developed and commercial) are available to assist schools with program improvement within industrial arts/technology education. For additional information, contact Hoyt R. Kenmore or Dr. Macke A. Williams of the Arizona Department of Education at (602) 255-5565.

Special Needs Education (For Disadvantaged, Handicapped, and Limited English Proficiency Students): By Jerry D. Bowman, Director of Program Support for Special Needs.

One of the Eskimo tribes, it is said, had no name for snow but instead had many names for the different kinds of snow that they experienced. To an anthropologist on his first visit, this diversity of names for snow was baffling; yet to the Eskimos, the anthropologist's general term "snow" was indiscriminate and confusing.

I am often reminded of this story because, like snow, vocational education can take many forms and can be delivered to students in many different ways. Instruction designed to meet the needs of students has been the clarion call of vocational educators. We can take pride in our accomplishments. We, like the Eskimo tribe, have recognized and responded to the "different kinds of snow."

The Carl Perkins Vocational Education Act, P.L. 98-524 has as one of its main purposes the assurance of equal access to quality vocational education programs for special needs populations. In order to serve our clients, it is important to understand how these funds are earmarked for special needs populations. The majority of the money allotted through this Act goes to the state for either "vocational education opportunities," which are to provide services for special needs populations, or to "vocational education program improvement, innovation, and expansion," which supports improvement, not maintenance, of existing vocational education programs. These funds are limited to pay 50 percent of the cost of additional staff, equipment, materials, and/or services that are not provided in the regular vocational education programs. The funds are provided on a matching basis which means that the state and local education agencies must pay the basic costs of vocational education programs plus 50 percent of any additional costs necessary for students who are handicapped or disadvantaged to participate in vocational education.

It is also important to understand that the Carl Perkins monies for special needs populations are very meager. It is likely that no district has enough federal or state fiscal resources to meet all the special needs services and activities that are needed.

So the challenge is, once again, for the vocational education community to come up with ways to adequately serve the historically underserved student. Special needs students are as different as the different kinds of snow. We must learn how to identify the help these students need. We must discover or create the resources necessary to provide the needed help. But most importantly, like the Eskimos, we must understand the nature and wonder of many different and "special" kinds of students who find economic and societal success because of our teaching efforts.

Note: "Education in Arizona's Secondary Schools for Jobs" was prepared in collaboration with Hugo H. Soll, Manager, Occupational Information System of Arizona.

Measuring Vocational Education Performance

Educators have been attempting to measure the effectiveness of vocational education programs for years. Typically, these measurement efforts have consisted of post-completer follow-up surveys. This method is usually very costly, has a low response rate, and the information that is obtained can be inaccurate, particularly with respect to income. Arizona Governor Bruce Babbitt recognized the need for accurate data on vocational education programs, particularly by prospective students who were evaluating various training programs. Legislation was passed requiring the Center for Vocational Education at Northern Arizona University to produce an annual report on placement rates and income earned by people completing vocational programs in Arizona.

Initially, putting this kind of information together would appear to be an extremely difficult and expensive task. However, quarterly wages as reported by Arizona employers are available by social security number through the Department of Economic Security's Unemployment Insurance files. It was decided that each community college and private vocational school in the state would send the social security number of each program completer between July 1, 1983 and June 30, 1984 to the Center for Vocational Education. The Center then compiled the information onto a computer tape and forwarded it to the DES Research Administration. The program completer file was then matched with the DES wage file in order to determine the number of completers with earnings between July 1, 1984 and June 30, 1985 and the average and median reported earnings for the same period by educational program. In order to ensure the confidentiality of the income data, a program must have three or more people with earnings in order to be included in the report. The data was further aggregated into program clusters.

Table 1 presents cluster data for all completers in the study. The data indicate that 64.3 percent of completers lack earnings in Arizona during the study year. The automotive/diesel technology cluster had the largest number of completers (3,257) and the child care/teacher aide cluster had the fewest (7). The highest wages were earned by miscellaneous technologies completers while truck and bus

Table 1

CLUSTER	COMPLETERS	COMPLETERS WITH EARNINGS 1984-85	AVERAGE EARNINGS 1984-85	MEDIAN EARNINGS 1984-85
Acting/Dancing	54	45	$ 5,059.32	$ 3,917.42
Agriculture	93	74	5,712.04	4,941.39
Allied Health/Social Services	2,523	2,050	8,407.03	7,516.09
Automotive/Diesel Technology	3,257	1,202	6,659.28	4,624.20
Aviation	238	189	5,875.96	5,300.81
Business	744	577	9,072.97	6,645.96
Child Care/Teacher Aide	7	4	6,659.99	4,801.19
Communications	323	253	7,681.68	6,141.98
Construction	98	71	10,496.04	9,260.33
Data Processing	917	771	9,858.59	8,543.00
Drafting	679	416	9,510.15	8,906.97
Electronics/Electrical Tech.	1,734	1,238	11,456.42	10,087.03
Environmental Technology	1,073	642	10,777.79	9,423.21
Foods/Interior Design/Textiles	595	443	6,132.66	4,785.19
Manufacturing	571	462	9,348.12	7,864.93
Miscellaneous Technologies	258	182	12,700.51	10,580.27
Nursing	885	737	9,989.60	9,503.40
Secretarial/Office Occupations	1,119	900	7,214.39	6,736.60
Service Occupations	558	433	11,870.16	8,203.06
Truck and Bus Driving	958	127	5,022.99	3,848.94
Cluster Code Missing	214	42	9,713.41	8,319.47
TOTAL	16,898	10,858	$ 8,933.31	$ 7,471.50

NOTE--Only People with Wages Used in Calculating Averages and Medians.

SOURCE: Arizona Department of Economic Security, Research Administration.

driving completers earned the least. However, it should be noted that only 13.3 percent of truck and bus driving completers earned wages in Arizona, so the wage data may be misleading.

Clearly, the data has some limitations. First of all, only those completers who had earnings in Arizona are counted; therefore, the placement rate is relevant only to Arizona placements. Secondly, there is no way to determine if the person is working full-time or part-time. Lastly, it is not known whether the job requires the vocational training that the completer received.

Even with the limitations of the data, the report provides a wealth of information for educators, students, and policymakers. The report is available to the general public. For further information, contact the center for Vocational Education at (602) 523-5442.

David Sinclair

Impact of Private Vocational Education on Arizona

Asking the proverbial question "What does higher education mean to me?" of a graduating high school senior can render responses as unique as the individual being queried. A student's desire to be job-ready with marketable skills in the shortest possible time, combined with increased competition in the work world, makes forgoing traditional universities in favor of private vocational institutions an even more viable alternative for high school students in Arizona.

The impact of those who choose this route to further their educational goals is reflected by the growing number of licensed postsecondary schools in Arizona. According to the Arizona State Board for Private Postsecondary Education, approximately 120 of these educational facilities are in operation in Arizona, servicing 30-35,000 students. While this figure does not include private insurance and real estate schools or home study students, the total equals the number of students enrolled in any one of Arizona's major state universities.

Bachelor degrees are offered at 15 of these schools while 12 have occupational associate degrees. Curriculums are designed for various occupations which do not require a traditional college degree. Programs range from accounting and air conditioning to travel agent and word processing. Additional vocational training offered in Arizona private schools include business, computer, mechanics, and health care fields of study.

Course completion length varies according to curriculum content with many certificate programs averaging six months to one year. Private vocational students benefit from this approach to job-oriented education in two ways: 1) smaller classes allow for personalized attention with hands-on intensified training, utilizing "state of the art" equipment and 2) extraneous academic courses are eliminated or minimized, thus accelerating program completion time.

While enrollment at these private postsecondary institutions is primarily comprised of recent high school graduates, this educational alternative attracts adult men and women who must take stock of their marketable job skills when economic hardships and technological advances render their traditional occupations obsolete. The reentry women, those who may have interruped or delayed their careers in order to raise families or those who need to return to work because of the death of their spouse or divorce, are discovering the benefits from training offered at Arizona's private schools.

Maintaining and fostering legislation affecting quality educational standards in these schools, the Arizona Private School Association (APSA) was formed in 1967 as a voluntary organization of private schools offering job-oriented specialized training

in business, trade, and industrial occupations. The Association is comprised of 70 nontax-supported educational institutions which provide career training services to the Arizona community. Common concerns among the APSA member schools focus on upgrading the quality of education in areas of enrollment practices, advertising, curriculum, and instructor training.

In order to demonstrate the economic impact of the private postsecondary educational industry in the state of Arizona, APSA surveyed its membership in January 1986. Survey findings indicate the following:

1) Based on 70 percent response, 1,539 employees (both full and part-time) work with APSA member schools.

2) Annual gross wages paid to these employees in 1985 was $26,208,754, averaging $17,029 per employee.

3) More than 80 percent of 1985 graduates from APSA member schools were employed in their field of study.

The effectiveness of Arizona private school educational programs is measured by the proportionate rate of job placement in Arizona of these private school graduates.

While no school can provide a 100 percent guarantee of job placement upon graduation, APSA member schools endeavor to gear their curriculums towards job-ready marketable skills. Career fairs, featuring companies that recruit their employees from students who attend private schools in Arizona, resume writing, and interview training are part of the ongoing activities presented by APSA member schools.

The occupational outlook is exciting for these Arizona private school graduates as studies indicate that 80-90 percent of employment opportunities in the next decade will require service and technical skills offered through training in Arizona private vocational institutions.

Robert D. Hartman, President
Universal Technical Institute

Vocational Education Program Helps Displaced Homemakers Avoid Poverty

Displaced homemakers are individuals who have been unpaid wives and mothers for a substantial number of years and are now displaced from that job because of divorce, separation, death, or disability of spouse. This makes it necessary for them to seek employment to support themselves and their family. Since 1978, PHASE (Project for Homemakers in Arizona Seeking Employment) has been funded through yearly grants from the Arizona Department of Education, Vocational Education Division, to address the needs of these displaced homemakers. The people who come to PHASE are primarily women aged 40-65. They have been, for the most part, out of the labor market for 15-20 years and are unsure of what they have to offer employers. If they have jobs, those positions are often minimum wage and entry-level, frequently without health plans, pension benefits, or career mobility. Without recent job skills, the displaced homemakers often need updated training and opportunities to acquire new skills. In addition, they need accurate labor market information to determine job demand and employment potential.

The image of an older displaced homemaker beginning her descent into poverty is very real, as seen daily in the new clients coming to PHASE. However, PHASE's comprehensive services help break this fall into poverty and welfare dependence. Typical services include individual vocational counseling, identification of skills and values, two-week Job Search Workshops, follow-up counseling, referral to training, or job placement. Throughout the process, PHASE personnel offer support and encouragement to help the person regain an identity and life direction.

The track record for PHASE is impressive. Since 1978, 3,026 displaced homemakers have been served. Within six months of completing the program, 63 percent have jobs, 31 percent are in training or educational programs, and 6 percent continue the job hunt.

A new dimension has been added to PHASE and other programs statewide that serve single parents and homemakers. With the enactment of the Carl Perkins Vocational Act in July 1984, a training component was instituted. Now all vocationally-funded single parent and homemaker projects can pay for training of their most economically disadvantaged clients. This training must be in high demand occupations and must lead to employment with benefits, a decent wage, and a future.

For many years PHASE was one of the only vocational programs to serve this population. As the demand for services increased, vocational education has been able to expand programs and services. Today PHASE continues to be a valuable resource for an increasing single parent and homemaker population. Thanks to PHASE and similar programs, displaced homemakers are regaining control of their destiny, are discovering unprecedented options, and are contributing to society in new and productive ways.

Jenny Erwin
State Equity Specialist

Diane Wilson
Director, PHASE

ASU, Thunderbird Offer Dual Degree Program in International Business

Arizona State University and the American Graduate School of International Management ("Thunderbird") have developed a dual degree program for graduate students studying international business.

"We believe this agreement represents a unique collaboration between public and private institutions," said ASU President J. Russell Nelson. "It expands the educational opportunities available to students pursuing careers in international business and makes the best use of the strengths of both institutions."

"This is the wave of the future in which public and private schools join forces, with the students benefiting," said William Voris, president of the Thunderbird School. "We expect to see more of this kind of thing around the country."

Cooperative education programs of this type are needed to help students meet requirements for increased knowledge in a wider variety of areas as they seek positions in today's rapidly changing business world, Voris explained. In addition, as the median age of the population increases, the pool of normal college-age students decreases, and schools are finding it necessary to offer attractive education opportunities that are best built on the strengths of more than one institution.

Approved by the Arizona Board of Regents in March, the dual degree program will begin in spring 1987. Students may begin applying for the program this fall. Students accepted to the new program will be able to earn a Master of Business Administration degree from ASU and a Master of International Management degree from Thunderbird by completing an approved program of courses at the two institutions. Full-time students can save from one semester to one year of study time through the dual degree program since they earn the MBA and MIM concurrently.

To qualify for the dual degree program, students must be accepted separately for admission to the MBA program at ASU, the MIM program at Thunderbird, and the dual degree program. It is expected that less than a dozen students will be admitted into the highly selective dual degree program the first semester.

The dual degree program was created in response to an emerging demand for business people with an understanding of international business. "As we move toward the 21st century, business leaders need not only an in-depth knowledge of basic business functions but also an ability to apply that knowledge on an international scale," said Voris. "This dual degree program provides an opportunity for selected students to have the best of both worlds."

According to Nelson, "This program offers much more than a regular business education and a language. It provides a strong business education with an emphasis in an area of international management selected by the student."

Designed to attract top students who can best take advantage of international business courses, the program offers students a variety of study. In addition to the advanced business courses available through the MBA program, ASU offers numerous courses targeted toward international business such as Economics in Developing Nations, Economics of the Soviet Union and Eastern Europe, International Transportation, International Finance, and Competitive Business Strategy. The wide range of Thunderbird courses from which students may choose includes International Marketing Research, International Marketing Management, Multinational Business Management, International Trade Administration, and Cross Cultural Communication for International Managers.

The ASU/Thunderbird agreement also makes it possible for students to take up to nine semester hours of approved Thunderbird graduate courses as international business electives within ASU's MBA program. MIM students at Thunderbird will be able to take up to nine hours of approved ASU coursework as part of the Thunderbird program. Normally, schools will accept only six hours of coursework from other universities.

Courses can be taken at no additional tuition charge. The student is charged tuition only at his or her school of principal attendance. The number of students who can participate in the cross registration is limited each semester, and a student can cross register for only one course per semester, unless deans of both schools concur in granting an exception.

Both ASU and Thunderbird have exchange study programs with schools in other countries. By way of example, ASU has agreements with Escole Superieure de Commerce de Nantes (ESC Nantes) in Nantes, France, and the Centre d'Ensergnement et de Recherche Appliques au Management (CERAM), near Nice, France. Thunderbird has a cooperative study agreement with Escuela Superior de Administracion y Direcion de Emtreses (ESADE) in Barcelona, Spain.

ASU's agreement with CERAM and ESC Nantes enables students from these colleges to earn an MBA from ASU after completing the required coursework. By the same token, ASU students are offered the same opportunity to earn graduate credit at these other universities toward their ASU degree.

Under the Thunderbird/ESADE agreement, students complete 30 hours of required coursework at Thunderbird and 36 hours at ESADE to earn a MIM from Thunderbird and a master's degree from ESADE.

Marcia Townsend Hilliard
Arizona State University

Arizona Unemployment Insurance Activities--July 1986

	July 1986	June 1986	July 1985	% Change From One Year Ago
Arizona Claimants Served*	34,622	33,503	31,633	9.4%
Arizona Average Weeks Unemployed**	8.6	8.5	8.5	1.9%
Arizona Benefits Paid*	$ 12,795,475	$ 11,035,491	$ 9,787,353	30.7%
Arizona Trust Fund Balance	$375,057,697	$371,365,100	$303,731,428	23.5%

*All Programs **UI Only

The Arizona Labor Force in August

The statewide unemployment rate for August dropped below the national average after having risen above it for the first time in over three years during July. Led by declines in the unemployment rate for Pima County and all but one of the rural counties, Arizona's unemployment rate is back to its level of a year ago and is comparable to rates experienced before the summer began. A combination of slightly rising employment and a substantial decline in the unemployed, probably the result of students and others withdrawing from looking for a job, contributed to the overall improvement. With statewide unemployment of 6.7 percent and unemployment in Maricopa and Pima counties at 5.3 and 5.4 percent respectively, the unemployment picture is back on track with earlier forecasts.

The state's employment growth in August, considering the stagnant to declining experience we usually observe at the end of the summer, was quite encouraging. During the summer, and particularly in August, hot weather and vacations keep employment from growing. But the early arrival of seasonal agricultural employment (citrus and chilies), along with preparation for the opening of another school year, all helped to temper expected losses.

The manufacturing industry has been an area of concern for many months, but August recorded a number of bright spots. Both the electronics and the aerospace industries each increased employment by 200. While these are both moderate increases, they do indicate that there is growing stability in segments of this industry. Additionally, the processing of citrus and chilies helped the Cochise and Yuma county economies to gain strength.

Recently, the construction industry has been showing signs of weakness. Not only has employment been growing slowly, but vacancy rates have been rising and building permits issued have been falling. This month, employment in construction declined by 400, as Maricopa County lost 500 workers and Pima County gained 100. If the peak has not yet been reached, it likely will be reached soon. Losses in industrial and commercial building activity will probably not be offset by the residential sector. As cooler weather arrives in the northern counties, little new building activity will be started there.

Elsewhere, the state's service-producing industries continued to perform quite favorably. With the arrival of a new school year, many companies had brisk business selling clothing, school supplies, and related items. In addition, schools brought maintenance staff and some instructors back early to prepare the school for another year. In terms of actual employment levels, activity in most sectors, except government, would probably be considered poor. But since larger losses had been expected due exclusively to the time of the year, activity for August has to be judged as good.

In summary, August was influenced principally by seasonal factors. In manufacturing, food processing related to citrus and chilies accounted for most of the job growth. The opening of school for another year helped employment in government and many sectors of retail trade. But those are only seasonal influences that will pass as quickly as they arrived.

On a more long-term basis, there was both positive and negative news. The positive news was the growth in employment shown by both electronics and aerospace companies. While the overall numbers are small and do not indicate a significant expansion, they do bode well for the future. But on the downside, construction employment seems to be near its peak, if not past it. Precipitous declines are not expected, but steady losses are probably forthcoming.

Nationally, the debate over economic policy and performance for the next one to two years is intensifying. Few economists expect a recession in the near future, but the range of expected performance is large.

Dan Anderson

Arizona Labor Force and Employment

August 1986 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986
TOTAL CIVILIAN LABOR FORCE**	1587.1	1592.4	1452.7	-5.3	+134.4
Total Unemployment	109.9	117.1	100.7	-7.2	+9.2
Rate	6.9	7.4	6.9	---	---
Rate (Sea. Adj.)***	6.7	7.0	6.7	---	---
Total Employment	1477.2	1475.3	1352.0	+1.9	+125.2

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1335.4	1331.6	1262.3	+3.8	+73.1
Manufacturing	185.2	183.5	182.2	+1.7	+3.0
Durable Goods	145.6	145.0	144.0	+0.6	+1.6
Stone, Clay and Glass	8.2	8.1	8.0	+0.1	+0.2
Primary and Fabricated Metals	16.2	16.2	17.3	+0.0	-1.1
Primary Metals	7.7	7.8	7.9	-0.1	-0.2
Fabricated Metals	8.5	8.4	9.4	+0.1	-0.9
Machinery	65.3	65.1	68.2	+0.2	-2.9
Other Durable Goods	55.9	55.6	50.5	+0.3	+5.4
Aircraft and Missiles	27.0	26.8	23.0	+0.2	+4.0
Lumber and Wood Products (Except Furniture)	7.6	7.6	7.6	+0.0	+0.0
All Other Durable Goods	21.3	21.2	19.9	+0.1	+1.4
Nondurable Goods	39.6	38.5	38.2	+1.1	+1.4
Food and Kindred Products	9.6	9.1	8.8	+0.5	+0.8
Apparel	4.5	4.6	4.8	-0.1	-0.3
Printing and Publishing	15.2	15.2	14.3	+0.0	+0.9
All Other Nondurable Goods	10.3	9.6	10.3	+0.7	+0.0
Mining and Quarrying	10.6	10.6	11.9	+0.0	-1.3
Copper Mining	8.1	8.1	9.3	+0.0	-1.2
Other Mining and Quarrying	2.5	2.5	2.6	+0.0	-0.1
Construction	117.6	118.0	113.4	-0.4	+4.2
Trans., Communications, and Public Utilities	65.4	65.4	63.3	+0.0	+2.1
Transportation	29.9	29.9	28.8	+0.0	+1.1
Communications and Public Utilities	35.5	35.5	34.5	+0.0	+1.0
Trade	329.3	329.8	310.2	-0.5	+19.1
Wholesale Trade	66.1	66.1	62.4	+0.0	+3.7
Retail Trade	263.2	263.7	247.8	-0.5	+15.4
General Merchandise and Apparel	39.8	40.1	39.1	-0.3	+0.7
Food Stores	39.9	40.1	37.1	-0.2	+2.8
Automotive and Service Stations	33.9	33.8	31.1	+0.1	+2.8
Eating and Drinking Places	93.2	93.2	88.7	+0.0	+4.5
Other Retail Trade	56.4	56.5	51.8	-0.1	+4.6
Finance, Insurance, and Real Estate	91.4	91.1	82.0	+0.3	+9.4
Services and Miscellaneous	321.9	323.2	299.0	-1.3	+22.9
Hotels and Other Lodging Places	30.5	31.1	28.7	-0.6	+1.8
Business Services	74.6	75.3	68.1	-0.7	+6.5
Health Services	78.8	78.7	73.5	+0.1	+5.3
Other Services	138.0	138.1	128.7	-0.1	+9.3
Government	214.0	210.0	200.3	+4.0	+13.7
Federal	42.1	42.3	41.4	-0.2	+0.7
State and Local	171.9	167.7	158.9	+4.2	+13.0
School	90.4	84.7	83.6	+5.7	+6.8

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

August 1986 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986	Aug.* 1986	Jul. 1986	Aug. 1985	Jul. to Aug.	1985 to 1986
984.7	990.0	895.2	-5.3	+89.5	306.0	306.7	283.2	-0.7	+22.8
53.6	55.1	48.8	-1.5	+4.8	16.9	17.7	14.7	-0.8	+2.2
5.4	5.6	5.5	---	---	5.5	5.8	5.2	---	---
5.3	5.3	5.3	---	---	5.4	5.6	5.1	---	---
931.1	934.9	846.4	-3.8	+84.7	289.1	289.0	268.5	+0.1	+20.6

t Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

881.5	883.4	828.4	-1.9	+53.1	238.0	237.6	228.2	+0.4	+9.8
131.4	130.1	130.7	+1.3	+0.7	32.8	32.9	32.1	-0.1	+0.7
104.9	104.2	104.5	+0.7	+0.4	27.4	27.5	27.0	-0.1	+0.4
5.0	5.0	4.9	+0.0	+0.1					
10.4	10.3	11.5	+0.1	-1.1					
51.6	51.4	54.1	+0.2	-2.5					
37.9	37.5	34.0	+0.4	+3.9					
26.5	25.9	26.2	+0.6	+0.3	5.4	5.4	5.1	+0.0	+0.3
5.9	5.8	5.7	+0.1	+0.2					
2.9	2.9	3.1	+0.0	-0.2					
10.7	10.8	10.3	-0.1	+0.4					
7.0	6.4	7.1	+0.6	-0.1					
0.5	0.5	0.6	+0.0	-0.1	1.6	1.6	2.3	+0.0	-0.7
82.2	82.7	78.5	-0.5	+3.7	22.6	22.5	22.2	+0.1	+0.4
43.1	43.2	41.3	-0.1	+1.8	9.7	9.8	9.5	-0.1	+0.2
20.0	20.0	19.5	+0.0	+0.5	4.9	5.0	4.4	-0.1	+0.5
23.1	23.2	21.8	-0.1	+1.3	4.8	4.8	5.1	+0.0	-0.3
225.0	225.6	210.7	-0.6	+14.3	54.7	54.9	52.0	-0.2	+2.7
53.1	53.3	49.9	-0.2	+3.2	7.7	7.6	7.6	+0.1	+0.1
171.9	172.3	160.8	-0.4	+11.1	47.0	47.3	44.4	-0.3	+2.6
25.4	25.7	24.9	-0.3	+0.5	7.0	7.1	7.0	-0.1	+0.0
25.2	25.4	23.5	-0.2	+1.7	6.9	7.0	6.3	-0.1	+0.6
21.8	21.7	19.7	+0.1	+2.1	5.8	5.8	5.3	+0.0	+0.5
60.3	60.1	57.3	+0.2	+3.0	17.6	17.7	16.5	-0.1	+1.1
39.2	39.4	35.4	-0.2	+3.8	9.7	9.7	9.3	+0.0	+0.4
72.1	71.7	64.2	+0.4	+7.9	12.8	12.9	11.7	-0.1	+1.1
218.4	219.6	200.1	-1.2	+18.3	59.0	59.3	56.1	-0.3	+2.9
16.4	16.9	15.5	-0.5	+0.9	5.0	5.1	4.6	-0.1	+0.4
61.5	62.0	55.7	-0.5	+5.8	10.4	10.5	9.7	-0.1	+0.7
53.1	53.0	49.0	+0.1	+4.1	16.0	16.0	15.5	+0.0	+0.5
87.4	87.7	79.9	-0.3	+7.5	27.6	27.7	26.3	-0.1	+1.3
108.8	110.0	102.3	-1.2	+6.5	44.8	43.7	42.3	+1.1	+2.5

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/86)

Nonmetropolitan Counties
Labor Force and Employment
August 1986

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,400	36,850	41,000	12,425	7,775	2,925	4,725
Total Unemployment	2,575	2,625	4,075	1,700	900	325	825
Rate	16.7%	7.1%	9.9%	13.7%	11.6%	11.1%	17.5%
Rate (Seas. Adj.)**. . . .	16.9%	7.1%	10.1%	13.8%	11.3%	11.0%	-INA-
Total Employment	12,825	34,225	36,925	10,725	6,875	2,600	3,900
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS							
TOTAL WAGE AND SALARY. . . .	15,125	25,350	35,850	10,000	4,575	2,675	2,750
Manufacturing.	750	2,525	2,800	1,300	175	0	100
Mining and Quarrying	25	150	50	1,225	0	1,625	0
Construction	1,025	1,275	1,725	450	125	150	150
Trans., Comm., & Pub. Util..	1,750	1,675	2,425	375	150	50	50
Trade.	1,575	5,425	8,150	1,975	1,275	275	875
Fin., Insur., & Real Estate.	300	700	775	275	125	25	100
Services and Miscellaneous .	4,550	3,825	9,325	2,000	850	75	700
Government	5,150	9,775	10,600	2,400	1,875	475	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	28,275	28,225	34,675	9,825	34,675	39,650
Total Unemployment	2,450	4,650	4,300	1,850	2,125	10,975
Rate	8.7%	16.5%	12.4%	18.8%	6.1%	27.7%
Rate (Seas. Adj.)**. . . .	8.8%	17.1%	11.7%	16.2%	6.3%	-INA-
Total Employment	25,825	23,575	30,375	7,975	32,550	28,675
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS						
TOTAL WAGE AND SALARY. . . .	19,000	20,400	26,150	8,125	22,525	23,325
Manufacturing.	2,575	1,975	3,450	1,400	2,425	1,575
Mining and Quarrying	275	1,125	3,350	0	575	50
Construction	1,300	1,150	1,400	375	2,050	1,650
Trans., Comm., & Pub. Util..	1,100	1,625	975	475	975	950
Trade.	5,375	3,850	4,800	3,050	5,700	7,250
Fin., Insur., & Real Estate.	950	350	750	250	950	900
Services and Miscellaneous .	4,075	5,750	2,775	1,150	5,000	4,400
Government	3,350	4,575	8,650	1,425	4,850	6,550

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs August 1986

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,587,080	1,477,214	109,866	6.9%
Apache	15,403	12,826	2,577	16.7
Cochise	36,836	34,214	2,622	7.1
Coconino	40,993	36,921	4,072	9.9
Gila	12,426	10,737	1,689	13.6
Graham	7,777	6,879	898	11.5
Greenlee	2,929	2,603	326	11.1
La Paz	4,722	3,901	821	17.4
Maricopa	984,741	931,111	53,630	5.4
Mohave	28,266	25,817	2,449	8.7
Navajo	28,226	23,567	4,659	16.5
Pima	305,935	289,079	16,856	5.5
Pinal	34,678	30,379	4,299	12.4
Santa Cruz	9,840	7,978	1,862	18.9
Yavapai	34,657	32,540	2,117	6.1
Yuma	39,651	28,662	10,989	27.7

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Estimated Hours and Earnings of Production Workers in Selected Industries in Arizona August 1986

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	AUG.* 1986	JULY 1986	AUG. 1985	AUG.* 1986	JULY 1986	AUG. 1985	AUG.* 1986	JULY 1986	AUG. 1985
FOR THE STATE OF ARIZONA*									
Manufacturing	403.51	406.72	382.18	40.8	41.0	40.4	9.89	9.92	9.46
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	382.23	381.92	359.79	41.1	41.2	40.7	9.30	9.27	8.84
Primary Metals	526.10	520.08	498.88	40.5	39.4	39.5	12.99	13.20	12.63
Machinery	368.24	371.07	323.17	39.3	39.9	38.2	9.37	9.30	8.46
Copper Mining	511.41	555.29	561.00	40.3	40.8	40.8	12.69	13.61	13.75
Construction	427.93	432.59	447.38	35.9	36.2	37.5	11.92	11.95	11.93
Utilities	606.42	615.85	593.16	43.1	43.4	44.2	14.07	14.19	13.42
Retail Trade**	239.51	242.26	239.14	32.9	33.6	33.4	7.28	7.21	7.16
Wholesale Trade	382.54	386.06	363.24	39.6	39.8	39.1	9.66	9.70	9.29

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/86)

Occupational Education in Arizona's Community Colleges

Occupational education (preparation for occupations requiring other than a four-year college degree that prepares individuals for immediate employment, more advanced preparation, or job and career changes) is one of six major objectives contained in the mission statement of the Arizona Community College System.

The System, comprised of 9 districts, 15 colleges, 29 campuses, 3 skill centers, and hundreds of instructional sites spread throughout all of Arizona's 15 counties, provides occupational training to approximately 88,000 individuals annually in over 1,400 job titles through 250 vocational programs approved by the State Community College Board.

The "typical" student served in an occupational program is a white female, 30 years of age, working full time, carrying a part-time load, attending in Maricopa County at a cost of $18.25 per credit hour.

Arizona's community colleges have a good record of responding in a positive way to the training needs of their communities. Postsecondary occupational education is constantly in motion, and this movement is not without direction. The State Community College Board, following involvement of the college districts in the development process, has adopted a position paper on occupational education in Arizona community colleges. The System has committed to an emphasis upon the following seven areas:

1. Training for Economic Development
   Community colleges work with business and industry to recruit a workforce, provide special training programs, provide technical assistance, and maximize resources by linking with other public agencies, federally-funded training programs, and private schools.

   Hundreds of quick-start, short-term training programs are conducted annually, many as a part of the Industry Training Services (ITS) program provided through the Arizona Department of Education or funded by the federal Job Training Partnership Act (JTPA) administered by the Arizona Department of Economic Security.

2. Advanced and Technical Training
   Business and industry look to the community colleges for advanced and technical training. Community colleges continue to improve in their ability to satisfy this need.

   One example that is typical of this effort is the Automotive Technician Seminars conducted for master mechanics by Glendale Community College in cooperation with General Motors, Ford Motor Company, the Independent Automotive Service Association, the Service Station Dealers of Arizona, the Automotive Service Council, and Industry Training Services.

3. Retraining and Upgrading the Workforce
   Today's community college student is older and most likely working while developing new knowledge and skills for a promotion, new career, or continued employment in an industry of rapid technological change. Community colleges utilize numerous nontraditional methods to meet the needs of an ever-changing and more demanding job market.

   Often, maximum accessibility is achieved through training at the employer's place of business or through the use of telecommunications. The time factor has also been conquered--to the advantage of the students and business needing a tailored course. Through "open entry/open exit" and "short term" course modes, training can be started at any time during the calendar year and be completed--and credits given--as soon as the student can prove competency. Today's training can be as immediate, accessible, and innovative as demanded by the student and/or the employer.

4. Linkages with Business and Industry
   Frequent interaction and long-term partnerships with business and industry

are critical to ensure that occupational training serves the current and future needs of the workforce.

Community colleges meet regularly with representatives of business, industry, and government through local advisory groups and organizations such as the Arizona Association for Industrial Development, Chambers of Commerce, and Private Industry Councils.

One example of a linkage for the sharing of resources is the machining program conducted by Cochise College in a classroom provided by Inland Motors Company at their Sierra Vista plant.

5. Linkages with Secondary Schools

Through almost 200 formal cooperative agreements, community colleges and secondary schools are working together to enable students to transfer vocational competencies attained in high school to the college without having to duplicate time and effort. County-wide vocational education planning is ongoing in all counties.

New state legislation (H.B. 2214) allows for the joint construction and operation of vocational facilities designed and located to serve both levels of students. A community college and secondary district are currently planning for construction of such a facility.

6. Faculty and Staff Updating

Community colleges utilize a variety of methods to provide occupational faculty with opportunities to continually update their knowledge base to enable them to deliver state-of-the-art training. While utilizing partnerships with business and industry, updating opportunities are provided through industry-education cosponsored seminars, work experience, vendor workshops, cross-training, and employee exchange.

The State Board has funded four faculty upgrading workshops, including one for prison program instructors which annually serves more than 1,500 incarcerated adults.

7. Accountability

The state's community college system is committed to accountability. While the ultimate accountability for occupational education is whether or not students obtain work as a result of their training, other measures are also necessary.

The State Board, in a cooperative effort with the districts, is working toward an accountability system which includes program and course competencies, business-industry verification of competencies, documentation of skills mastered, state funding for completers only (currently in effect for skill centers), adherence to program standards, prioritizing of programs for funding purposes, and student follow-up in relation to job placement.

The newly published "Study of Public and Private Postsecondary Instruction Vocational Education Program Completers," by the Arizona Center for Vocational Education at Northern Arizona University, is an attempt to measure the effectiveness of postsecondary vocational education programs in Arizona. This annual survey, mandated by S.B. 1352, is somewhat limited in process and data base. Through annual refinement, it has the potential to provide more reliable information for prospective students and comparative data for accountability purposes. Additional follow-up is conducted annually at the state and local levels regarding the outcomes of individual programs.

These seven areas of emphasis reaffirm the community college commitment to quality occupational education in Arizona.

We believe the most cost-effective way to meet the current and future training needs of Arizona is to capitalize on the existing investment in community college occupational training, services, and facilities.

Gordon Hall
Associate Director
State Board of Directors for Community Colleges of Arizona

Career Development for Teachers

For several years now, Americans have been engaged in a spirited debate over the quality of education offered by our nation's public schools. This debate has covered a wide range of subjects and has generated a variety of proposals for reform. The "issue of standards" has been one topic addressed by most reform efforts. Discussions of standards have ranged from requirements for graduation from high school to colleges of education and has included discussion of recruitment, certification, evaluation, and compensation of teachers. Virtually every "reform" recommendation has been justified on the grounds that it would "raise standards" and thereby improve the quality of public education.

The Arizona Education Association supports the Career Development Model as explained below. This support is based on the belief that education reform should attend to the question of how compensation and the school environment support or hinder effective instruction, constructive relationships between teachers and students, collegial relationships among teachers, growth opportunities for teachers, and the proper role of school administrators. Efforts for reform in education should be focused then on the following factors and based on the best education research available:

ATTRACTION
--of high quality and more individuals into the teaching profession.

RETENTION
--of good teachers in the profession.

MOTIVATION
--of teachers to improve teaching skills.

The design of a career development model is based on the belief, along with supportive research, that teaching is a complex process that occurs in situations that vary widely and unpredictably. Career development looks at the work teachers do, their professional change over time, and the skills they need to do the job.

Career development is a conceptual framework that defines the occupation of teaching as a single, unified professional occupation. It describes teaching not only as an occupation, but also as a career that develops in stages over a period of time. In a career development model, teachers are identified as decision makers and the model regards decision making as the core skill of the professional practitioner. At least one source estimates that teachers make on the average one decision every two minutes.*

Career development can also be viewed as an alternative approach to compensation reform. In theory, it can achieve what merit pay and career ladders have not been able to achieve. Career development never loses sight of teaching as the focus of both the occupation and the career. Career development defines clearly the work that teachers do in terms not only of why they do what they do, but also in terms of skill needed to do the job. Career development defines professional growth more clearly than any other approach and assures that such growth, while advancing a career, need not remove teachers from their classrooms.

Within the career development model, the occupation of teaching is comprised of multiple roles. A role is a pattern of tasks. The roles within career development are:

INSTRUCTION--this role concerns the content of instruction and incorporates state, district, and subject area goals; subject content; and student knowledge and skill.

CLASSROOM MANAGEMENT--this role includes instructional techniques, the coordination of human and material resources for the classroom, and the promotion of an environment conducive to learning.

COUNSELING--this role includes meeting individual and group academic needs and motivational techniques.

The occupation of teaching is also comprised of multiple functions. A function is an action or behavior viewed as a process that involves more than one step or is continuous. The three functions within career development are:

PLANNING--encompasses methods devised for doing something or for achieving some end.

IMPLEMENTATION--refers to the action stage of a plan in which a teacher gives it practical effect.

EVALUATION--means the review of plans and action to determine the degree of success.

Teaching is a complex occupation. Its complexity increases when one considers the various skills teachers need to execute each function and fulfill each role. Figure 1 depicts this complexity.

The roles and functions of teaching and their nine skill areas describe the occupation of teaching. The grid portrayal describes the work that teachers, all teachers, do. The description is true, whether a teacher has taught three years or 30 years, teaches in an elementary school or a secondary school, or teaches physical education or American literature.

In career development, teaching is regarded not only as an occupation but also as a career. When teaching is the occupation of an individual's working history rather than one in a series of occupations, a teaching career exists. Teaching as a career is the second concept of career development.

When teaching is viewed as a career, changes in professional practice become evident. The roles, functions, and skill areas that describe teaching as an occupation remain constant; but the practice of teaching changes. This change is

Figure 1
Basic Career Development Framework

Decision-Making Roles	Decision-Making Functions		
	Planning	Implementation	Evaluation
Instructional	Instructional Planning Skills	Instructional Implementation Skills	Instructional Evaluation Skills
Classroom Management	Management Planning Skills	Management Implementation Skills	Management Evaluation Skills
Counseling	Counseling Planning Skills	Counseling Implementation Skills	Counseling Evaluation Skills

called development. The idea of career development presupposes that the practice of teaching changes over time in much the same way as the practices of other professionals such as doctors, lawyers, and architects change. These changes occur in stages called:

1. Establishment
2. Adaptation
3. Extension

Upon entry into the profession and during the Establishment stage, teachers apply their basic knowledge and skills in practice and establish themselves as professional practitioners. As they gain experience, they adapt their basic knowledge and skills to the constantly changing conditions of classroom life. This Adaptation stage is characterized by variation and integration of professional knowledge and skill. In time, teachers acquire professional power that enables them to extend their knowledge and skills through leadership and innovation. Figure 2 portrays this concept.

From this portrayal, it is evident that teaching can be both an occupation and a career wherein teachers can experience growth and challenge without having to leave the profession.

A career development model also contains four other components: Professional Growth, Evaluation, School Environment, and Compensation.

PROFESSIONAL GROWTH

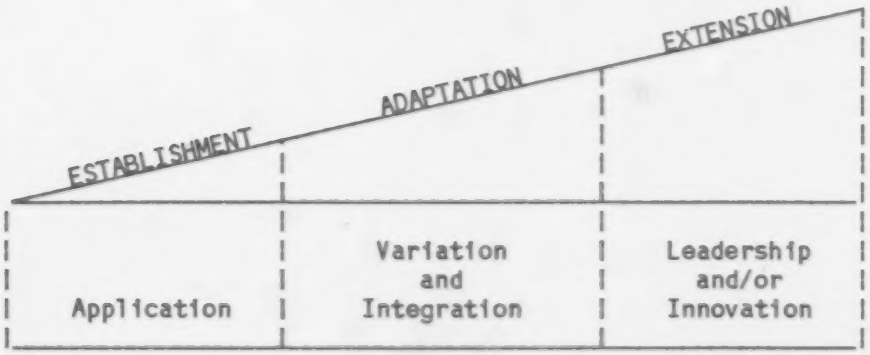
Professional growth is a process of establishing, adapting, and extending one's skills and knowledge as a teacher. Professional growth must be continuous and integrated into the workday of the teacher. Professional growth is a planned, purposeful, and deliberate activity to improve an individual's performance on the job. The training must be relevant and flexible enough to allow teachers to adapt it to their classroom needs. Teachers must identify their own training needs and be committed to change.

EVALUATION

In education, two kinds of personnel evaluation may occur, summative evaluation and formative evaluation. Summative evaluation occurs at the end of some general effort such as at the end of the probationary period. Information gathered for summative purposes is designed to serve personnel decisions made by an external audience such as the principal. Personnel decisions include the selection, placement, promotion, or dismissal of individuals.

Formative evaluation occurs during a period of activity in order to enhance acquisition of skills. Information gathered during formative evaluation is designed to serve the needs of the teachers engaged in the process. The formative decisions made by teachers may address their specific skill strengths or weaknesses and may be used to

Figure 2
Levels of Career Development



design a range of professional development activities for an indivdual teacher or group of teachers.

SCHOOL ENVIRONMENT

An effective school system is dependent upon the school environment. An attempt to manipulate one component of this system such as the physical plant or instructional resources impedes rather than promotes the achievement of an effective educational system. Past attempts at educational reform have failed to take into account the interdependency of all components in the school environment. If the career development model is to be successful in implementation, changes in the school environment must occur.

A well-drawn portrait of an effective school would show many distinct features. Among these are:

1. Effective school-site management.
2. Instructional leadership.
3. Staff stability.
4. Curriculum articulation and organization.
5. Schoolwide staff development.
6. Parental involvement and support.
7. Schoolwide recognition of academic success.
8. Maximized learning time.
9. District support.

COMPENSATION

Beginning salaries for public school teachers are not competitive with salaries offered to comparably educated graduates by private industry. In all the research on attraction of teachers to the profession, starting salary is an important factor.

The minimum salary for all full-time teachers needs to be increased to $22,000 in 1987-1988.

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* Christopher M. Clark and Penelope L. Peterson, "Teachers' Thought Processes" in Merline C. Wittrock (ed), Handbook of Research on Teaching, 3rd ed., Macmillan Publishing Co., New York, 1986, p. 274.

Nancy Whitaker
Program Director, Profession Development
Arizona Education Association

Case History of a Successful Supported Employment Program

Supported Employment is a concept of vocational training and employment for physically and mentally disabled persons designed to help them get and keep jobs in the community. Arizona is one of only ten states participating in a federally-funded demonstration project for Supported Employment. The project targets four client populations (developmentally disabled, brain injured, chronically mentally ill, and severely physically disabled) creating work opportunities with ongoing support provided after placement.

Nationally, sheltered workshop programs are beginning to expand or convert their programs to a community-based supported work model. New agencies have been started specifically to create and to promote Supported Employment opportunities. One such organization is Dorothy Kret and Associates, Inc. (DKA), a community-based employment training firm with experience in Supported Employment programs.

According to Dorothy Kret, president of DKA, "The first goal is to prepare our clients for a private-sector job while they are with us. Our handicapped clients come to us with a real enthusiasm to succeed on their jobs and to be independent, but with little practical job

experience. Though they support hiring the handicapped, many private employers will not take a chance on someone who has not proven themselves in the job market. Our job is to prepare the client for work by teaching specific job skills and appropriate work behaviors."

DKA operates work stations in grocery stores, hotels, and janitorial firms in Maricopa and Pima counties. At a Basha's Market in Phoenix, one of Kret's trainees patiently "faces" canned goods--turns the labels to the front and moves them forward on the shelf. She takes pride in the way the aisle looks when she completes the task. Another, whose favorite job is vacuuming, works for Tucson's Mr. Janitor, cleaning a bank building.

"The approach for finding appropriate jobs is to look for the repetitive but essential tasks that exist in many businesses that employers can't keep filled with good people. Some jobs are ideal for the developmentally disabled, since the routine is a good learning tool and there is little burnout among employees," says Kret. "Entry-level positions in data entry are a good way for persons with limited mobility to start a career and show what they can do."

By providing on-site supervisors to work with trainees, DKA's host employers are guaranteed of quality. Work-site supervisors help the existing employees relate to their new co-workers, assist with job-site modifications, and make sure everything runs smoothly."This is a cooperative effort," she says. "Basha's is in the grocery business; we are in the training business."

The search for job sites in the private sector is highlighted by the need to find employers who can support an in-house program. Basha's has 44 stores throughout Maricopa County. DKA provides training at two stores and helps to arrange for clients to be hired permanently in stores nearer their homes. The agency provides a job coach to follow up and assist the client's transition to the new position.

Dealing with the government is, by nature, complicated. Most Supported Employment programs deal with the red tape by performing all of the interface work with the state and federal agencies. "We handle all the paperwork--Department of Labor Special Worker Certificates (which enable us to start trainees at a wage rate less than the federal minimum), time studies, training reports, etc. And when you choose to hire a trained program participant, we will arrange for the maximum employer incentive," Kret says.

The program is responsible for all aspects of the client's training. Host companies are billed each pay period for client costs. DKA handles the computation of salaries and the issuance of checks. The firm also names the host as additional insured on its general liability insurance; covers the trainees' employee-related expenses (FICA, FUTA, UI, and Workers'Compensation); and pays for the on-site supervisors.

DKA supervisors necessarily become experts in the particular work stations to which they are assigned. "The purpose for the program is to help people become valuable employees. The work-site jobs are the means to that end. Therefore, each supervisor must understand the technical aspects of each trainee's job, how it relates to the company as a whole and to the industry itself," Kret says.

At the Westward Look Resort in Tucson, a full-time supervisor oversees eight clients in housekeeping, kitchen, banquet, and landscaping tasks. She is able to operate several types of equipment, assist with scheduling employees, and prepare for the daily routines and needs in each of the four departments.

Each trainee's productivity is regularly assessed to determine wages that are based on the employer's hourly rate for the job measured against the client's degree of normal worker production. Performance evaluations are conducted by the supervisor who also has the responsibility for breaking down complicated jobs into routine tasks that can be memorized and mastered.

The work site supervisors are clearly essential to the program's success, and for that reason, DKA invites the host employers to participate in their hiring.

Job performance and appropriate behaviors are stressed throughout the training process. Clients learn early that punctuality, proper grooming, and task completion are expected. Regular team meetings of clients and supervisors are held. Monthly achievement awards are made to clients who meet or surpass performance goals or have graduated to independent employment.

Nine DKA clients have been hired into permanent positions during the past year, all in jobs with the businesses where they had been initially trained. One of DKA's graduates, who is employed as a laundry-room worker in a Scottsdale-area resort hotel, was rated at more than 100 percent of normal worker production before he completed the training component of his work experience. Although he had limited prior job history, the program gave him the opportunity to learn a particular skill and showcase his unusual ability to the hotel before they chose to hire him.

Some job experiences are painful, such as lay-offs due to the seasonal nature of the resort industry. "We try to plan for such situations with alternate work sites, but it's hard," Kret says. "We let the clients know that the layoff isn't their fault and is only temporary. But like other workers, being laid off only sharpens their desire to work."

The program remains involved in the client's job after he or she is hired as a permanent employee. New skills are learned through the job coach. Problems that employees may have with other staff members, changes in bus schedules, or personal difficulties that affect job performance can be handled through regular job-site or home visits. The common bond of each of the Supported Employment programs throughout the country is this provision of ongoing support services.

"The cost of a Supported Employment program is bound to save taxpayer dollars. Studies have shown that for every $1.00 spent on vocational programs, taxpayers realize an $11.00 savings. It will cost a lot less over time to have us keeping our eyes on successfully-placed clients and running interference than to have them receiving benefits, losing their jobs, and recycling throughout the system," says Kret. "Our clients are those that have been traditionally thought of as unemployable when, with our support, they can be productive citizens."

What kind of future does Supported Employment have? On this subject, Kret is very enthusiastic. "Even if there were no reduction in the money for vocational training, Supported Employment would be a good idea. With the cutbacks, programs like this are even more essential. The one way we can really strike a partnership with the private sector that will provide the opportunity for jobs and job training is to make Supported Employment a good deal for them as well as the clients."

Is there a downside to Supported Employment? Clearly it is not an appropriate placement for every disabled person. A work program cannot replace competent case management, nor can it solve all of the problems of socialization facing some disabled people. DKA's clients do show a marked increase in appropriate behaviors in the program, but she admits to the need for continued support from outside the workplace. Group homes, advocates, guardians, and others must still assist in the support. Although it replaces some of the conventional services for the disabled, the Supported Employment concept complements the system by providing a next step for those persons who can develop the necessary life and job skills.

And what do Kret's clients think of Supported Employment? One of her clients who had successfully completed training and had been hired at a hotel was asked that question by a newspaper reporter. He answered, in a friendly, though insistent fashion, "Can you wait a few minutes? I have to run this load up to the third floor."

Michael Lex
Dorothy Kret and Associates, Inc.

New OIS Reports for Career Counselors and Vocational Education Planners

The Occupational Information System of Arizona (OIS) has released the following new reports:

1. "1985 Arizona Apprenticeship Data by Training Program (CIP) Code and by County" (OIS Report #86-4)

2. "1985 Arizona Proprietary School and Community Based Organization (CBO) Enrollments and Completers by Vocational Training (CIP) Program and County" (OIS Report #86-5)

3. "1985 Job Service Data - Statewide" (OIS Report #86-7-ST)

4. "1985 Job Service Data - Maricopa and Pima Counties" (OIS Report #86-7-MP)

5. "1985 Job Service Data - All Counties Except Maricopa and Pima" (OIS Report #86-7-BOS)

The apprenticeship report provides information on enrollments, new registrants, completers, cancellations, and ending actives. Training is classified by the Classification of Instructional Programs (CIP) vocational training areas. The proprietary school report provides information on enrollments and completions for CBOs and proprietary schools. The proprietary school enrollments are broken into in-state and out-of-state and are by CIP vocational training area.

The Job Service reports provide detailed information by the Dictionary of Occupational Titles (DOT) occupational classifications relating to job openings, job applicants, job placements, and wages offered by employers.

For occupations and training areas referred to in the above reports, detailed demand and training information can be obtained through the MICRO OIS of Arizona.

Copies of these reports and information on accessing the MICRO OIS can be obtained by writing or calling Hugo H. Soll, OIS Manager, ASOICC/Research Administration, P.O. Box 6123 (Site Code 897J), Phoenix, Arizona 85005. Telephone: (602) 255-3680.

Hugo H. Soll

ASOICC Resurrects Occupational Briefs

The Arizona State Occupational Information Coordinating Committee (ASOICC) has resurrected the former "Arizona Occupational Guide"--produced and distributed by the Labor Market Information staff through 1979--as the "Arizona Occupational Brief." The one-page briefs will provide current information concerning job description, training and qualifications, salary, lines of advancement, employment outlook, and additional information on selected occupations in Arizona. Briefs have been printed, or are in the process of being printed, covering jobs as secretary, receptionist, registered nurse, licensed practical nurse, and groundskeeper. Additional briefs will soon be available for the occupations of plumber, cement and brick mason, and heavy equipment operator.

The briefs are distributed primarily by the Arizona Department of Education, but they will also be available on request to the ASOICC Office at 255-3680.

Stan Butterworth

Statistics--Arizona Education

Statistics in Education
(Grades K-12)
1984-85

Number of Pupils Enrolled in Public Schools	577,492
Number of Pupils Enrolled in Private Schools	51,596
Total State Enrollment	629,088
Number of Public Schools	909
Number of Private Schools	375

Public Schools

Number of Classroom Teachers	28,988
Female = 69% Male = 31%	
Total Expenditures (all education programs)	$1,750,806,471
Average Cost per Pupil	$3,150.91
Revenues:	
State Aid	51.99%
Local Support	24.93
Federal Aid	6.29
County Aid	3.99
Other	12.80

SOURCE: Arizona Department of Education, September 1986.

Enrollment in Arizona Public Universities and Community Colleges
Fall 1985

	Total Students (Headcount)	Total Students (FTSE)*
Public Universities**		
Arizona State University	38,029	29,646
ASU West	2,529	695
Northern Arizona University	12,615	10,319
University of Arizona	30,374	25,411
Subtotal	83,547	66,071
Public Community Colleges***		
Arizona Western College	3,911	1,766
Central Arizona College	4,504	1,809
Cochise College	3,939	2,086
Eastern Arizona College	3,692	1,743
Glendale Community College	13,377	6,096
Maricopa Technical Community College	2,765	1,128
Mesa Community College	16,789	7,814
Mohave Community College	3,162	1,041
Northland Pioneer College	5,260	1,505
Phoenix College	11,592	5,398
Pima Community College	20,409	9,413
Rio Salado Community College	12,057	2,794
Scottsdale Community College	7,809	3,622
South Mountain Community College	1,443	611
Yavapai Community College	5,191	1,610
Subtotal	115,900	48,436
Grand Total	199,447	114,507

*FTSE=Full-Time Student Equivalent=Total number of credit hours divided by 15.

**SOURCE: Arizona Board of Regents, August 1986.

***SOURCE: State Board of Directors for Community Colleges of Arizona, September 1986.

State Appropriations for Higher Education
1985-86
(in thousands)

	Appropriations 1985-86	2-Year Change
University of Arizona	$186,428	+26%
Arizona State University	136,754	+31%
Northern Arizona University	48,109	+27%
Community Colleges	57,410	+29%
Other Appropriations	3,641	N/C
Total	$432,342	+28%

How Arizona Ranks Among the 50 States

1985-86 Appropriations		Appropriations Per Capita		Appropriations Per $1,000 of Personal Income		2-Year Change Less Inflation		10-Year Change Less Inflation	
Amount	Rank	Amount	Rank	Amount	Rank	Percent	Rank	Percent	Rank
$432,342,000	25	$142.88	16	$11.96	16	+18%	8	+25%	20

N/C--Not Comparable.

SOURCE: The Chronicle of Higher Education, October 30, 1985.

Tuitions and Fees at Arizona's Colleges and Universities

	1985-86	1986-87	
	Tuition and Fees	Tuition and Fees	Out-of-State Tuition
American Indian Bible College	$2,162	$2,222	$ 0
Arizona College of the Bible	2,900	3,290	0
Arizona State University	990	1,136	3,125
Arizona Western College	384	384	3,216
Central Arizona College	480	510	3,720
Cochise College	510	510	2,430
College of Ganado	1,164	2,700	0
DeVry Institute of Technology	3,740	3,846	0
Eastern Arizona College	416	512	2,352
Embry-Riddle Aeronautical Univ.-Prescott	3,780	4,080	0
Grand Canyon College	2,810	3,085	0
Maricopa County Community College District	480	548	3,090
Mohave Community College	292	294	2,364
Navajo Community College	770	770	0
Northern Arizona University	990	1,136	2,556
Northland Pioneer College	120	120	2,180
Pima Community College	408	408	2,088
Prescott College	4,275	4,575	0
Southwest Conservative Baptist Bible College	2,860	3,160	0
University of Arizona	990	1,136	3,124
Western International University	2,250	2,850	0
Yavapai College	540	500	3,410

SOURCE: The Chronicle of Higher Education, August 6, 1986.

New Developments

At least $100 million in building is underway that will change the complexion of the Arizona State University (ASU) campus during the next three years. The first project, already completed, was a $3.9 million, three-level parking garage at College Avenue and Apache Boulevard. It provides 1,567 spaces at a charge of $90 per year.

A four-level parking garage at McAllister Avenue and Tyler Street providing 823 spaces is scheduled for completion in February. By June 1987, a third parking garage will be built on the western end of campus behind the Tempe Center.

Other projects in the construction program include an $8 million expansion of Sun Devil Stadium, a $15 million Fine Arts Complex, an $11.5 million expansion of Hayden Library, a $20 million student-recreation complex, and a $10 million Student Services Building.

The University of Arizona (U of A) will sell nearly 96 acres of farmland located near Mesa's Tri-City Mall for $12.2 million to Main Street Mesa Associates under a tentative agreement. If the sale is approved by the State Board of Regents, the money will become an investment for the U of A agricultural-endowment fund.

Main Street Mesa Associates hopes to develop the land into light-industrial and commercial use. The U of A will retain 15 acres on the site for the Urban Horticulture and Landscape Design Center. The former research farm is bounded by Alma School Road on the east, Dobson Road on the west, Main Street on the north, and Broadway Road on the south.

The Center for Advanced Purchasing Studies, a new research institute devoted to the study of purchasing, will open October 1 at Arizona State University Research Park, five miles south of the main ASU campus in Tempe. The Center, a joint venture between the ASU College of Business and the National Association of Purchasing Management, will look at purchasing and materials management as they relate to business needs and will be funded privately through corporate and individual contributions.

Maryvale High School, in west Phoenix, is one of 28 schools selected nationwide to participate in a three-year school-improvement project called Mastery in Learning. The program, sponsored largely by the National Education Association, provides the schools with about $28,000 annually to promote teacher decision-making in changing and improving school and district policies. The money will be used for materials and programs that teachers want to use and implement.

The Mastery in Learning project was started last year in five pilot schools. This year, 700 elementary, junior high, and high schools applied for the program, with 28 schools selected. The schools were chosen based on the racial, ethnic, and socio-economic diversity of its student body.

Arizona State University has opened its Downtown Center in a part of the former Phoenix Union High School campus at Seventh and Van Buren streets. The Downtown Center consolidates at a single location the classes that ASU has been offering downtown in various government conference rooms for years. This Center gives the university a headquarters in Phoenix's business and governmental center.

Most of the 100 students currently attending classes at the Center are downtown workers taking night classes to complete master's degrees. For now, most of the classes are in government and business. Bette DeGraw, director of the Center and former deputy director of the state Department of Economic Security, said that future course offerings will be tailored to meet the needs of downtown workers. However, she expects the Center to stay with traditional academic offerings, rather than offer recreational classes such as aerobics.

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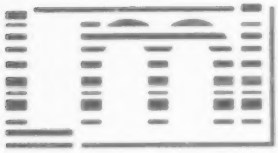

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